

Date: Fri, 1 Jul 94 04:30:08 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #727
To: Info-Hams

Info-Hams Digest Fri, 1 Jul 94 Volume 94 : Issue 727

Today's Topics:

 900 MHz
 Best basic antenna tuner reference?
 Cage Dipole Rings
 COM-SER Labs BR-1000-A Service monitor HELP !!
 Ham radio Class?
 Kenwood TH-78A
 Kenwood TS-450S/AT or Yaesu 890 w/AT -- HELP! (2 msgs)
 QST H/Brew Iso-loop
 RF hazards
 Temp. Conversion Chart: F & C?
 TS440S Service Manual Wanted
 Waiting for License? Wait some more
 What hams do on vacation.

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 30 Jun 1994 22:15:25 GMT
From: ihnp4.ucsd.edu!swrinde!elroy.jpl.nasa.gov!wp-sp.nba.trw.com!
gatekeeper.esl.com!m22104.esl.com!user@network.ucsd.edu
Subject: 900 MHz
To: info-hams@ucsd.edu

Has anyone built anything for the no-license required 900 MHz band?

I assume FCC type acceptance would not be required for home-brewed, albeit
compliant, gadgets for personal use.

JD Whitaker - jd_whitaker@smtp.esl.com - KE6HEV

Date: 1 Jul 94 03:48:10 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!paris.ics.uci.edu!ucivax!
gateway@network.ucsd.edu
Subject: Best basic antenna tuner reference?
To: info-hams@ucsd.edu

Anyone can suggest a readable (to the novice to engineering)
text or article on the basic antenna tuner circuits? I would like
to learn the very basic circuits and be able to build up simple
prototypes to play around with. I have the ARRL Antenna book and
it is helpful, but not what I am looking for. For instance, I
know basically how the L-network looks and the Pi-network, but what
the heck does the Differential-T look like? How does the Z-match
compare? I want to build up the 5 or 6 basic tuners in small
form to see them operate and get a feel for them - as well as
read a little theory about them.

73

Clark
WA3JPG

Date: Fri, 01 Jul 94 05:05:50 GMT
From: ihnp4.ucsd.edu!pacbell.com!amdahl!netcomsv!netcomsv!skyld!
jangus@network.ucsd.edu
Subject: Cage Dipole Rings
To: info-hams@ucsd.edu

In article <2ukiuk\$5j@crcnis1.unl.edu> mcduffie@unlinfo.unl.edu writes:

>

> > david.siglin@ccibbs.com (DAVID SIGLIN) writes:

>

> > The Cage Dipole is an outstanding antenna system that has been in
> > use in the US Navy for many years. It more recently found its way into
> > use with the M.A.R.S system.

>

> > Finding the rings is the tough part. If you are interested in this
> > type antenna or want help locating the spreader rings leave e-mail here
> > or on prodigy (UWKJ62A) or give me a call at (901) 476-7171.

>
> I would be interested in the spreader rings and any tips for keeping
> them in place. This gives me some ideas too. I am going to be
> putting up a full wave square loop for 160m. What if all four legs
> were constructed in the same manner? Has anyone played with this?
>
> 73, Gary

Tip of the week: Head on down to the local sewing supply shop and ask for embroidery rings. These are pairs of concentric rings. In various sizes depending on your skill/ambition level. I've used the to make cage dipoles in the past. The only ones that really need reinforcement are the ones at the ends/middle where they connect to a single point such as an insulator or center connector.

On holding them in place, put the smaller one inside the cage, slip the larger one around the wires. Once in place to keep it there, use scraps of wire to twist across the hoop. (Same technique utility wires are held onto insulators with).

Have fun. By the way, the concept behind the cage dipole is to broaden the bandwidth of the antenna. Somewhere it is written that the Q of a dipole is dependant on (among other things) the ratio of element diameter to length. building a cage (usually 6-8 wires) allows you to decrease the ratio and increase the bandwidth.

73 es GM from Jeff

Amateur: WA6FWI@WA6FWI.#SOCA.CA.USA.NOAM	"You have a flair for adding
Internet: jangus@skyld.grendel.com	a fanciful dimension to any
US Mail: PO Box 4425 Carson, CA 90749	story."
Phone: 1 (310) 324-6080	Peking Noodle Co.

Hate "Green Card Lottery"? Want to help curb ignorant crossposting on Usenet?
E-mail ckeroack@hamp.hampshire.edu for more information, or read news.groups.

Date: 1 Jul 1994 03:54:47 GMT
From: ihnp4.ucsd.edu!usc!cs.utexas.edu!utnut!torn!news.unb.ca!nbt.nbnet.nb.ca!
ve1fc.nbnet.nb.ca!ve1fc@network.ucsd.edu
Subject: COM-SER Labs BR-1000-A Service monitor HELP !!
To: info-hams@ucsd.edu

Have a COM-SER LABRATORIES BR-1000-A Service monitor.
Am in bad need of a service manual for the beast.

Have tried to contact the company and they are no longer in business. If anyone knowing of any information re a service manual please contact me via MAIL or phone

Thanks in advance for any help.

RGDS

Graham

VE1FC

ph (506)367-2693

Date: 30 Jun 1994 02:02:00 GMT
From: ihnp4.ucsd.edu!swrinde!gatech!news-feed-1.peachnet.edu!umn.edu!mr.net!winternet.com!craigb@network.ucsd.edu
Subject: Ham radio Class?
To: info-hams@ucsd.edu

does anyone know where i can take a class and test in Edina, MN or Mpls, MN? or sournding areas?

Thanks,

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--

Craig Borchardt Edina, MN -= LINUX =-
Internet: craigb@winternet.com FidoNet: craigb@1:282/31
IRC: Craig -- Talk Requests Welcome -- Phone #: Just Ask
Talk: craigb@icicle.winternet.com
Finger craigb@winternet.com for PGP key

Date: Fri, 1 Jul 1994 04:23:43 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!news.tamu.edu!news.utdallas.edu!feenix.metronet.com!dismondo@network.ucsd.edu
Subject: Kenwood TH-78A
To: info-hams@ucsd.edu

In article <R0xSh2d.brunelli_pc@delphi.com>, <brunelli_pc@delphi.com> wrote:
>Athos Facchi <facchi@locarno.cc.columbia.edu> writes:
>>different models, I decided to get a Kenwood TH-78A. Does anyone out there
>>have any experience with this radio or with Kenwood products in general?
>Athos,
>I have a TH78 and like it very much. It has good sensitivity for a HT
>and it does dual-in-band very well. It is not too bad to
>program, but make copies of the manual, and you will be all set.
>de n1qdq

I have to agree. My th78a does very well. In fact a friend of mine who is an avid Alinco nut is considering the possibility of buy the 78 over the alinco duel band TH (i think it is the dj-580) I really like the extreamly low power option (.02 wats in VHF and .01 in UHF) as this is enough power for close line of sight and allows the battery to last forever ! Use the low power with a vox in the ear mic setup and it works great for hiking and biking. The only draw back is the folks at kenwood have decied to switch the connector for the mic and speaker from the more standard arrangement. This may give you some grief if you want to barrow a friend's headset. Or just get all your friends to buy kenwoods :-)

Dismondo.

Date: Fri, 1 Jul 94 01:38:42 -0500
From: ihnp4.ucsd.edu!usc!cs.utexas.edu!convex!news.duke.edu!eff!news.umbc.edu!
europa.eng.gtefsd.com!ceylon!noc.near.net!news.delphi.com!usenet@network.ucsd.edu
Subject: Kenwood TS-450S/AT or Yaesu 890 w/AT -- HELP!
To: info-hams@ucsd.edu

I have the Yaesu 890 with antenna tuner and have been highly pleased with it. Just took it to Field Day where it performed great.....over 500 contacts to a butternut vertical.....with the possibility that someday ur rig may need some service.....the Yaesu service dept gets rigs back to people MUCH quicker that Kenwood.....Yaesu has a reputation for better audio.....u will sound better to station on other end.....73 N6WR

Date: 1 Jul 1994 00:32:30 -0700
From: ihnp4.ucsd.edu!usc!nic-nac.CSU.net!csulb.edu!paris.ics.uci.edu!not-for-mail@network.ucsd.edu
Subject: Kenwood TS-450S/AT or Yaesu 890 w/AT -- HELP!
To: info-hams@ucsd.edu

In <pc5RhQa.armond@delphi.com> armond@delphi.com writes:

>I have the Yaesu 890 with antenna tuner and have been highly pleased with it.
>Just took it to Field Day where it performed great.....over 500 contacts
>to a butternut vertical.....with the possibility that someday ur rig may
>need some service.....the Yaesu service dept gets rigs back to people MUCH
>quicker that Kenwood.....Yaesu has a reputation for better audio.....u will sound
>better to station on other end.....73 N6WR

Well, I do respect your opinion of the 890, it is a really fine little rig. However, your advice is anecdotal, and is not correct in my experience.

1. Kenwood service does not take a long time. I hear this once in a while, but I have been to Kenwood service several times in the last two years, and in only one case did it take longer than a week, and that was for something really fishy with my 440. They have treated me well and quickly lots of times.

2. Yaesu does not have a reputation for better audio than Kenwood in my neck of the woods. In fact, the opposite is true, but I don't really listen to the "reputation" stuff, go out and listen to each one, the mike makes a difference, as does the individual voice. I have heard some guys with 890's that sound great, some sound muddy. Same with 450's.

3. I really admire Yaesu for designing an auto tuner that goes to 160, that is the only real advantage I see in the 890, and it is a big one to a guy like me. If my 10 year old Corsair wasn't far superior to both rigs in basic receiver performance (flame on ?), I might consider trying to get one of those little 890 rice boxes. Nice unit.

73

Clark
WA3JPG

Date: Wed, 29 Jun 1994 17:55:09 GMT
From: ihnp4.ucsd.edu!usc!sol.ctr.columbia.edu!news.ess.harris.com!
jabba.ess.harris.com!mlb.semi.harris.com!controls.ccd.harris.com!
drs@network.ucsd.edu
Subject: QST H/Brew Iso-loop
To: info-hams@ucsd.edu

Andy Domonkos (domonkos@access.digex.net) wrote:
: Anyone build the QST loop antenna from the May 94 issue? I understand
: it can be resized for 40M. Anyone do that yet?

: Andy N3LCW

I built a 40 meter loop a few years ago. If you want to experiment with this sort of thing, I suggest you get a copy of Ted Hart (W5QJR) book about small high efficiency loop antennas. He came out with the book several years ago. I would guess that he did a lot of the research, experimentation and documentation that AEA (Iso-loop) and others are now marketing. The QST article is just a variation of W5QJR's ideas. I didn't read the whole article, but I don't think the importance of low loss in the variable capacitor was stressed. W5QJR went so far as to sell a capacitor that was made out of copper plates

with all the parts silver soldered together for low loss.

73's Doug, N4IJ

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-----  
|           Doug Snowden           |  
|           N4IJ                   |  
| email: drs@ccd.harris.com       |  
-----
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Date: Fri, 1 Jul 1994 07:07:36 GMT
From: news.Hawaii.Edu!uhunix.uhcc.Hawaii.Edu!jherman@ames.arpa
Subject: RF hazards
To: info-hams@ucsd.edu

There was some discussion on the QRP newsgroup regarding RF hazards -
here is one article that hits close to home.

Reprinted with Kevin's permission.

Jeff NH6IL

Date: Tue, 14 Jun 1994 08:52:00 -0700 (PDT)
From: "Muenzler, Kevin" <MUENZLERK@uthscsa.edu>
Subject: RE: EMF and Ham Radio Operators
To: QRP News Group <QRP@Think.COM>

It is quite true that at the power levels and frequencies that
amateur radio operators use pose little threat from EMF radiation
one must still be very careful when operating at the higher
powers and frequencies.

There are several rules that you should (MUST) follow:

** NEVER operate your amp with the cover removed!

This is specially true when operating 2 meters
and above. I have a friend who was almost totally
blinded after making "adjustments" to his 1KW
440 amp with the cover removed for several hours
of "testing." He also had to have one of his
testicles removed due to the "cooking" effect of
the radiation from his open amp. He stated that
there was no pain in his eyes. He simply woke up

the next day in a dark haze. He did however have have significant pain a couple of days later in the other area.

** As Dr Zabrodski stated, use the lowest possible power when operating UHF handhelds (its the law also).

There can be significant heating of the retina by UHF radiation, especially in the 900+MHz bands. This usually causes no pain and by the time the effects are noticed the damage is done and is irreversible.

** NEVER look into the horn of a microwave transmitter (gunplexer)

If you can see the opening, you are being exposed. It only requires a few milliwatts per square centimeter to cause significant heating of the retina by a microwave transmitter. As stated above, the damage is almost never noticed immediately and is almost always irreversible.

I learned these, among other safety tips by working part-time at KTSA/KTFM Radio while attending the University of Texas here in San Antonio. When working around amplifiers that produce upwards of 25KW and antennas with 100KW ERP ones learns about EMF safety or goes blind and sterile.

Amateur radio is perfectly safe if practiced with a little common sense. Follow the rules, use the lowest power to maintain communications.

Kevin,

Legal stuff:

The above opinions are my own and not necessarily those of the staff, faculty, administration, or lab animals (woof!) of The University of Texas Health Science Center at San Antonio or anyone else who is not me.

Kevin R. Muenzler, WB5RUE
muenzlerk@uthscsa.edu

The University of Texas Health
Science Center at San Antonio

** There is no such thing as a Monkey-Proof Program! **
** I can prove it! **

Date: 1 Jul 94 03:23:06 GMT
From: ihnp4.ucsd.edu!agate!cat.cis.Brown.EDU!noc.near.net!news.delphi.com!BIX.com!
hamilton@network.ucsd.edu
Subject: Temp. Conversion Chart: F & C?
To: info-hams@ucsd.edu

While we're on the topic of conversions, can someone help me
out with some others that have been really boggling me?

MHz	to	KHz
Feet	to	Inches
Dollars	to	Cents

Also, what is that stuff that collects in your belly button
called?

Regards,
Doug Hamilton KD1UJ hamilton@bix.com Ph 508-358-5715
Hamilton Laboratories, 13 Old Farm Road, Wayland, MA 01778-3117, USA

Date: 1 Jul 1994 04:57:52 GMT
From: ihnp4.ucsd.edu!usc!elroy.jpl.nasa.gov!lll-winken.llnl.gov!noc.near.net!
news.delphi.com!mmoulding@network.ucsd.edu
Subject: TS440S Service Manual Wanted
To: info-hams@ucsd.edu

Hi am looking for a copy of the Service Manual for the Kenwood TS-440-S
transcievers.

Pse EMail if you can help.

Thanks, Mark, KE7NS

mmoulding@delphi.com

Date: 30 Jun 1994 21:51:02 GMT
From: ihnp4.ucsd.edu!usc!elroy.jpl.nasa.gov!wp-sp.nba.trw.com!gatekeeper.esl.com!
m22104.esl.com!user@network.ucsd.edu
Subject: Waiting for License? Wait some more
To: info-hams@ucsd.edu

In article <2uhojp\$d31@tymix.Tymnet.COM>, flanagan@niagara.Tymnet.COM (Dick

Flanagan) wrote:

```
> For what it's worth, here is the chronology of my wife's license:
>
> Passed exam: March 12, 1994
> VEC gave paperwork to FCC: March 28
> FCC issued license: June 14
> FCC postmarked license: June 17
> License received: June 21
>
> To save you looking at your calendars, the FCC had it in their hands
> for twelve weeks from receipt to postmark. Time from examination to
> license receipt: fourteen weeks and three days.
>
> Your milage may--and probably will--vary.
>
> 73, Dick, W6OLD
> --
> Dick Flanagan, W6OLD                                w6old@n6qmy.#nocal.ca.usa.na
> dick@libelle.com                                    CIS:73672,751 GEnie:FLANAGAN
```

I also took my test on the 12th of March, at the Sunnyvale VEC, I received my call on the 6th of Jun.

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-----
JD Whitaker - jd_whitaker@smtp.esl.com - KE6HEV
-----
```

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Date: Fri, 01 Jul 94 05:07:23 GMT
From: ihnp4.ucsd.edu!pacbell.com!amdahl!netcomsv!netcomsv!skyld!
janguis@network.ucsd.edu
Subject: What hams do on vacation.
To: info-hams@ucsd.edu
```

In article <9406271358.AA12163@umassmed.UMMED.EDU> sbaker@umassmed.UMMED.EDU writes:

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> I had a dream once about driving down a hill and seeing a tribander on
> the roof of a 3 story apartment building. After about 2 months, I was
> driving down a hill not too far from home and there it was! (Even in my
> sleep I scan!)
```

Wow, it's like deja vu all over again!

Amateur: WA6FWI@WA6FWI.#SOCA.CA.USA.NOAM | "You have a flair for adding
Internet: jangus@skyld.grendel.com | a fanciful dimension to any
US Mail: PO Box 4425 Carson, CA 90749 | story."
Phone: 1 (310) 324-6080 | Peking Noodle Co.

Hate "Green Card Lottery"? Want to help curb ignorant crossposting on Usenet?
E-mail ckeroack@hamp.hampshire.edu for more information, or read news.groups.

Date: Thu, 30 Jun 1994 13:48:23 GMT
From: ihnp4.ucsd.edu!swrinde!emory!europa.eng.gtefsd.com!sundog.tiac.net!
usenet.elf.com!rpi!psinntp!arrl.org!zlau@network.ucsd.edu
To: info-hams@ucsd.edu

References <1994Jun24.014247.10908@egreen.wednet.edu>,
<2uqq19\$ng1@clarknet.clark.net>, <MTN4kiubGIft067yn@access.digex.net>arrl.or
Subject : Re: hf radiation

andy domonkos N3LCW (domonkos@access.digex.net) wrote:
: In article <2uqq19\$ng1@clarknet.clark.net>,
: josephl@clark.net (Joseph A. Liu) wrote:
: > John Mollan - Harm (jmollan@egreen.iclnet.org) wrote:
: >
: > : When it comes to UHF signals in the microwave areas, care must be taken,
: > : but these are not the frequencies (about 1000 Mhz) used by ham operators.

The known and accepted hazard is mostly to people physically working on the
antennas and equipment. Microwaves are dangerous because energy is
easily contained in a small volume. For example, 25 watts concentrated
in a little piece of metal will melt tin (called soldering irons).
Yet a 25 watt space heater is pretty much useless for heating even a
tiny apartment.

: >
: > Could you talk about this a little bit more? What if your house is located
: > near teleco microwave towers? Could it be harmful?

: If you're in line of site of and in the path (direct or 'knife edge
: refraction from a mountain as was in Leukemia Valley in Northern NJ)
: then you can be in serious trouble. Generally the beam width is small and
: as long as the antenna is high enough over head it probably isn't saturating
: anything below.

Consider this example, you have a big 15 ft dish antenna with a 0.6 degree
beamwidth. Thus, over the distance of 1 mile, the radiation is mostly
concentrated in an area with a radius around 30 ft. Thus, if you are
running a 100 watt transmitter, or 10,000 mW, the power density is

0.038 mW/cm². At a radius of 60 ft, the power density is probably down by a factor of 100. Thus, if the antenna were pointed at another antenna, you probably wouldn't be in the region of greatest power density, unless you were working on that antenna or flying between the two.

Now, most antennas don't have as sharp a beamwidth. This means the radiation is spread over a wider area, but you don't have as high a peak power density.

It may be counter-intuitive, but things like little horn antennas are actually more hazardous than big dish antennas. The opening of a little horn antenna may have very high field strengths. On the other hand, that big dish antenna may not have high field strengths anywhere except at the dish feed (again, that little horn antenna). This is usually less dangerous, since people tend to associate big dishes with danger and tend to keep away. Popping your head *inside* unfamiliar mechanical structures is often unwise to begin with.

An exception may be periscope antenna systems, which may be banned by those worried about legal/safety problems. What you do is you mount the dish on the ground and bounce the signal off a reflector mounted on the tower. Obviously, some vandal inside the fence may easily expose herself to strong fields.

--

Zack Lau KH6CP/1 2 way QRP WAS
 8 States on 10 GHz
Internet: zlau@arrl.org 10 grids on 2304 MHz

Date: 1 Jul 1994 02:01:55 GMT
From: tymix.Tymnet.COM!niagara!flanagan@uunet.uu.net
To: info-hams@ucsd.edu

References <772329681.AA01202@afarm.uucp>, <2uqn3t\$32t@tymix.Tymnet.COM>,
<2urr63\$7jb@news.iastate.edu>a.ed
Subject : Re: License Renewal

In article <2urr63\$7jb@news.iastate.edu> wjturner@iastate.edu (William J. Turner) writes:

>

>In article <2uqn3t\$32t@tymix.Tymnet.COM>, flanagan@niagara.Tymnet.COM (Dick Flanagan) writes:

>|> In other words, you may continue to operate until you eventually receive
>|> your renewed license =OR= until you are notified by the FCC that it was
>|> not renewed.

>

>So, if you never renew and you never *tell* the FCC you didn't renew,

>you can operate forever? (Yeah, right!)

When I said "you may continue to operate" I was responding to the original poster who stated he had made timely application for renewal but hadn't received his renewed license yet. Sorry to have confused you.

73, Dick

--

Dick Flanagan, W6OLD
dick@libelle.com

w6old@n6qmy.#nocal.ca.usa.na
CIS:73672,751 GEnie:FLANAGAN

End of Info-Hams Digest V94 #727
